IN THE CLAIMS

Please amend the claims as follows:

Claims 1-35 (Canceled)

Claim 36. (Currently Amended) A method for diagnosis of blood brain barrier permeability in a subject comprising:

detecting a first elevated level of S100β in the blood of a patient;

identifying a second elevated level of S100β in the blood of the patient after said first elevated level of S100β is detected; and

comparing first and second elevated levels of S100β wherein a statistically relevant first level of S100β protein is indicative of blood brain barrier permeability without neuronal damage and a second elevated level of S100β is indicative of neuronal damage.

Claim 37. (Previously Presented) The method of claim 36, wherein the second elevated level of S100β has a value which is greater than said value of first elevated level of S100β.

Claims 38 –40 (Canceled)

Claim 41. (Previously Presented) The method of claim 36, wherein said value of said second elevated level of S100β is greater than twice the value of said first elevated level of S100β.

Claim 42. (Previously Presented) The method of claim 36, wherein said value of said first elevated level of S100β is in the range of about 0.12 ng/ml to 0.35 ng/ml.

Claim 43. (Previously Presented) The method of claim 36, wherein said value of said second elevated level of S100β is in the range of about 0.35 ng/ml.

Claim 44. (Currently Amended) A method for diagnosis of blood brain barrier permeability in a subject comprising:

detecting a first elevated level of S100β in the blood of a patient, said first level of S100β being indicative of blood brain barrier permeability without neuronal damage; and

identifying a second elevated level of S100β in the blood of the patient after said first elevated level of S100β is detected, the second elevated level of S100β having a value greater than said value of said first elevated level of S100β.

Claim 45. (Previously Presented) The method of claim 44, wherein said value of said second elevated level of S100β is indicative of neuronal damage.

Claim 46. (Previously Presented) The method of claim 44, wherein said value of said second elevated level of S100β is greater than twice the value of said first elevated level of S100β.

Claim 47. (Previously Presented) The method of claim 46, where wherein said value of said second elevated level of S100β is indicative of neuronal damage.

Claim 48. (Previously Presented) The method of claim 44, wherein said value of said first elevated level of S100β is in the range of about 0.12 ng/ml to 0.35 ng/ml.

Claim 49. (Previously Presented) The method of claim 44, wherein said value of said second level of S100β is in the range of about 0.35 ng/ml.

Claim 50. (Previously Presented) The method of claim 44, wherein the first elevated level of S100β is detected using an immunoassay.

Claim 51. (Previously Presented) The method of claim 44, wherein the second elevated level of S100β is detected using an immunoassay.

Claim 52. (Previously Presented) The method of claim 50, wherein the immunoassay is an immunoprecipitation assay.

Claim 53. (Previously Presented) The method of claim 51, wherein the immunoassay is an immunoprecipitation assay.

Claim 54. (Previously Presented) The method of claim 44, further comprising detecting levels of NSE and GFAP.

Claim 55. (New) A method for diagnosis of blood brain barrier permeability in a subject comprising:

detecting a first elevated level of S100β in the blood of a patient, wherein said first level of S100β has a value of about 0.12 ng/ml to about 0.35 ng/ml;

identifying a second elevated level of S100β in the blood of the patient; and

comparing first and second elevated levels of S100β wherein a statistically relevant first level of S100β protein is indicative of blood brain barrier permeability without neuronal damage and a second elevated level of S100β is indicative of neuronal damage.

Claim 56. (New) The method of claim 55, wherein the second elevated level of S100β has a value which is greater than said value of first elevated level of S100β.

Claim 57. (New) The method of claim 55, wherein said value of said second elevated level of S100β is greater than twice the value of said first elevated level of S100β.

Claim 58. (New) The method of claim 55, wherein said value of said second elevated level of S100β is in the range of about 0.35 ng/ml.

Claim 59. (New) A method for diagnosis of blood brain barrier permeability in a subject comprising:

detecting a first elevated level of S100β in the blood of a patient, wherein said first level of S100β has a value of about 0.12 ng/ml to about 0.35 ng/ml, wherein said first level of S100β being indicative of blood brain barrier permeability without neuronal damage; and

identifying a second elevated level of S100β in the blood of the patient, the second elevated level of S100β having a value greater than said value of said first elevated level of S100β.

Claim 60. (New) The method of claim 59, wherein said value of said second elevated level of S100β is indicative of neuronal damage.

Claim 61. (New) The method of claim 59, wherein said value of said second elevated level of S100β is greater than twice the value of said first elevated level of S100β.

Claim 62. (New) The method of claim 59, wherein said value of said second level of S100β is in the range of about 0.35 ng/ml.

Claim 63. (New) The method of claim 59, wherein the first elevated level of S100β is detected using an immunoassay.

Claim 64. (New) The method of claim 59, wherein the second elevated level of S100β is detected using an immunoassay.

Claim 65. (New) The method of claim 63, wherein the immunoassay is an immunoprecipitation assay.

Claim 66. (New) The method of claim 63, wherein the immunoassay is an immunoprecipitation assay.

Claim 67. (New) The method of claim 59, further comprising detecting levels of NSE and GFAP.